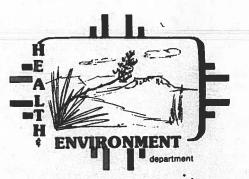
WATER GUALITY DATA

Discharges From Uranium Mines and Mills in New Mexico

NM Health and Environment Department Environmental Improvement Division WATER POLLUTION CONTROL BUREAU July 1980





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		Laguna-Cebolleta Area	
		Sohio Western Mining Compan J J #1 Mine	60
	В.	MINES UNDER DEVELOPMENT	
		Crownpoint-Nose Rock Area	
		Phillips Uranium Corporation Nose Rock Mines	66
		East Ambrosia Lake-West Mt. Taylor Area	
		Gulf Mineral Resources Corporation, Mt. Taylor Mine	68
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		Laguna-Cebolleta Area Anaconda Company P-10 Mine Sohio Western Mining Compan J J #1 Mine United Nuclear Corporation St. Anthony Mine	60 60
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WATER QUALITY DATA FOR DISCHARGES FROM NEW MEXICO URANIUM MINES AND MILLS

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JULY 1980

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Table XVIII

Ranchers - Johnny M Mine

	10/27/77 Discharge	11/17/78 Discharge	11/07/79 Discharge	11/07/79 Raw Mine Wate
TSS mg/1	2.6	7.8	The sales were	
TDS mg/1	520	511	8.0	1088
cond umhos	855		574	753
рН	8.35	737	784	756
As mg/1	.011	0054	7.94	7.85
Ba mg/1	NA	.0056	.017	.044
Se mg/1	,008	.346	1.671	.212
Mo mg/1	.24	.061	.043	.128
NH ₃ mg/1	.115	.325	.390	.612
Na mg/1		.125	.03	.36
Cl mg/1	101.2	101.2	101.2	101.2
SO ₄ mg/1	8.8	10.2	14.1	8,53
Ca mg/1	213.7	204.5	183.7	188.5
K mg/1	1	55.2	55.8	51.6
	a different House	3.9	3.51	3.90
		237.4	246.5	256.0
	1	<.005	< .001	< .001
nitrate + nitrite	mg/1	.56	.38	
Mg mg/1			11.5	.36
V mg/1		.043	.027	15.6
Zn mg/1		< .100	<.250	1.408
A1 mg/1			.645	< .250
Pb mg/1		<.005	<.005	17.8
			2,005	008
gross ≪ pCi/1		1500±100	700±50	1700.100
Ra-226 pCi/1	23.±1	200±10	3.0±.9	1700±100
Ra-228 pC1/1	0±2		3.01.9	
Pb-210 pC1/1	33±6		- /	T 67 to 19 10 7
U mg/1	.67	.76	2.25	5.09

raw mine water sample withdrawn at the inlet to the initial settling pond at the Section 35 mine. The temperature of this raw mine water was 20.3°C.

Prior to 1979 there was a pond associated with early sand-slime separations for backfill located near Section 35. The radio-logical data for this pond, sampled in 1978, is shown in Table XVII. During 1979 Kerr-McGee reclaimed the pond area; it appears that they have not only produced a gently contoured area, but also have reseeded the disturbed surface.

Ranchers Exploration and Development Company Johnny M Mine

Further to the east of Section 36 is the Johnny M mine of Ranchers Exploration and Development Corp. The host rock is the Poison Canyon Member of the Morrison Formation. Backfill using sands from Kerr-McGee's mill with a technique similar to that used at Kerr-McGee's Section 35 and Section 36 mines began in 1977. This mine is relatively young, and in 1977 when the first visit was made, treatment of the discharge was flocculant and batches of BaCl₂ addition as the water entered the first of the two unlined settling ponds. Since then a facility for the BaCl₂ addition has been built and 100 pounds per day or about 5.5 mg of BaCl₂ per liter of inflow water is added. In 1977 the discharge was 800 gpm; in 1978, 1000 gpm; and in 1979, 1500 gpm. Water temperature of the mine water outflow was 21°C. Any treated mine water not taken by the Lee Ranch for irrigation use is piped to a discharge ditch which drains into the Rio San Mateo.

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